



Commonwealth of Massachusetts Department of Fish & Game

Mary B. Griffin, Commissioner

DIVISION of ECOLOGICAL RESTORATION

Tim Purinton, Director

Ebb & Flow

An electronic newsletter from the Massachusetts Division of Ecological Restoration

Ebb&Flow #13

August, 2012

An electronic newsletter from the Massachusetts Division of Ecological Restoration (DER)

<http://www.mass.gov/dfwele/der>

Greetings, restoration friends and colleagues,

There has been a whirlpool of activity this summer: tidal flows have been restored, dams have been removed, and hundreds of volunteers have been reading staff gages, assessing culverts (see lead article), and getting engaged in river and wetland stewardship events.

To chronicle our efforts, DER has acquired (through a grant with the [Eastern Brook Trout Joint Venture](#)) a new GoPro® Hero camera that captures crisp, time-lapse images of work at DER-managed projects; two examples include the [removal of the Hopewell Mills Dam on the Mill River in Taunton](#) and the [bank stabilization and channel grading](#) following the removal of the Thunder Brook Dam in Cheshire. New videos will be announced first on our Twitter account, so follow us at @MassEcoRestore (twitter.com/MassEcoRestore) – also see what Commissioner Mary Griffin and our other colleagues are up to by following the Department of Fish and Game at @MassDFG (<https://twitter.com/MassDFG>).

Both the Cheshire and Taunton restoration efforts were DER-designated [Priority Projects](#). Priority Projects are eligible for funding and expert technical assistance from DER staff. DER and the Patrick-Murray Administration are pleased to announce six new Priority Projects (click [here](#) to read the press release).

As summer ebbs and the energy of autumn starts to flow, it's the best time to explore Massachusetts rivers, wetlands and estuaries. Trout and bluefish are active, the shorebirds are migrating and the summer crowds are gone.

So see you on the water --

Sincerely,

Tim Purinton, Director



Feature Article:

Design with the River in Mind

By Carrie Banks

Communities are becoming more aware of how their transportation and ecological infrastructure overlap. As a result, they are identifying and prioritizing locations where improvements would benefit the environment, infrastructure and public safety goals. DER staff often works in consultation with municipalities, highway departments, conservation commissions and others, providing technical assistance and resources, to help them design and construct transportation and infrastructure projects with the ‘river in mind.’





“The Good, The Bad & The Ugly”: Stream crossings should be designed to span stream and banks and to mimic the natural stream channel by providing comparable flows, water velocities, and substrates. A good example of this is depicted in the first photo. Poorly designed stream crossings (second and third photos) restrict natural flows, create high velocities, provide insufficient water depths, and/or are perched above the streambed, causing an outlet drop that can’t be navigated by most fish and other aquatic organisms. The photos were taken as part of the Westfield River Watershed River Continuity Surveys.

With over 30,000 road-stream crossings in Massachusetts, our road and stream networks frequently intersect each other. As long linear systems, both our roads and streams are vulnerable to becoming obstructed and disconnected. Over the past several years, DER and [UMass Extension](#), working in conjunction with other state agencies and watershed organizations, have led a cadre of volunteers to [document](#) and assess road-stream crossings throughout Massachusetts to determine to what extent they create barriers to fish and wildlife passage. Based on the survey findings and other comprehensive surveys conducted in the Northeast, on average, **approximately 40-50% of the stream crossings surveyed create barriers to fish and wildlife passage** (click [here](#) and [here](#) to read news stories about the survey and its findings). Just imagine the disruption if a similar percentage of the human transportation infrastructure were likewise blocked, causing obstructions to the flow of traffic at 12,000-15,000 of the bridges and culverts here in Massachusetts. This would severely limit the movement of people, goods and materials.

The [River Continuity Partners](#), a collaboration of partners working to remove barriers and [restore river and stream continuity](#), met in March 2012 to share resources and tools to encourage the removal of barriers. Topics included case studies of crossing failures and replacements, survey protocols and resources, planning and prioritizing tools, updates on [Massachusetts Stream Crossing Standards](#) (last updated in March of 2011) and relevant permits, and discussion on obstacles, challenges and needs to implement more river continuity projects throughout the Commonwealth.

With funding from the U.S. Environmental Protection Agency’s [Wetland Program Development Grants](#), the Massachusetts Department of Environmental Protection (MassDEP) is [partnering with DER and UMass Extension to recruit and train volunteers to survey 600 crossings in the Chicopee, Buzzards Bay and Ipswich River watersheds](#) to better identify and prioritize crossing upgrades that can have the greatest benefit to fish and wildlife passage. MassDEP will use the information gained through this project to target stream crossings proposed to be altered during permitting. MassDEP’s data management system, “[WIRE](#)”, can now geospatially display projects with stream crossings proposed. By using the WIRE and [Stream Continuity databases](#), MassDEP can then target for further review projects that have the best potential to restore river and stream continuity and landscape connectivity.

In addition: the [Massachusetts Stream Crossing Handbook](#) has recently been updated to reflect the current (March 2011) **Massachusetts Stream Crossing Standards and to share current guidelines, resources, tools, and case studies**. The *Handbook* is intended to inform local decision makers, highway departments, conservation commissioners and advocates about the importance of properly designed and maintained culverts and bridges for fish and wildlife passage. [Click [here](#) to access electronic versions of the updated [Stream Crossings Handbook](#) and [Poster](#); hard copies of these documents are expected to be available (and obtainable through DER) later this year.]

The work of the River Continuity Partners is timely as many communities increasingly need to upgrade and replace their transportation infrastructure. In this past year, [culvert failures have cost communities millions of dollars in property and infrastructure damages](#). Road closures lead to increased costs in terms of limited emergency access, additional commute times and lost business revenue. Many crossings fail, sometimes repetitively, due to the inability to pass high flows and materials.



“Culverts Behaving Badly”: This road crossing over Walker Brook in Becket has repetitively failed during high flow events (October 2005 and August 2012), costing the town hundreds of thousands of dollars. The culverts placed at this location were inadequate for high flows, created fish passage barriers and did not allow the movement of sediment and materials stirred up by the high flows.



Well-Behaved Crossing: This bottomless arch culvert over Bronson Brook in Worthington was designed with the river in mind and safely passed a large volume of water, trees and debris during Tropical Storm Irene.

[Crossings designed with the river in mind, and that facilitate the passage of aquatic organisms by following guidelines similar to those in the Massachusetts Stream Crossing Standards, have been found to safely pass huge volumes of water, sediment and debris stirred up by high flows.](#) The River Continuity Partners want to share these success stories and the tools, funding and technical resources and expertise to help communities achieve their ecological, public safety and transportation goals. With funding from the [Massachusetts Environmental Trust](#) and the [Westfield River Wild & Scenic Advisory Committee](#), through support of the River Continuity Partners, led by the [Massachusetts Rivers Alliance](#) and the [Berkshire Environmental Action Team](#) (BEAT), **three stream-smart road crossing workshops are now being planned for Fall 2012-Spring 2013 in Western Massachusetts.** The workshops will be targeted for DPW personnel, engineers, conservation commissioners, Selectboards and other stakeholders interested in minimizing conflicts between human and ecological infrastructure. With the understanding that road washouts are bad for budgets and bad for habitat, the hope is to bring together these various partners to support more projects that benefit both the municipal and ecological communities. Contact me at (413) 579-3015) or carrie.banks@state.ma.us or stay tuned to the [DER](#) or [BEAT](#) web pages for more details on these workshops as they are arranged.



Division of Ecological Restoration News and Project Updates

Hopewell Mills Dam Removal Begins in Taunton



The photo on the left shows the RC&D construction crew chipping away at the spillway of Hopewell Mills Dam. The photo on the right shows the Mill River freely flowing through the site for the first time in over 200 years.

TAUNTON -- On August 10th, excavators began chipping away at concrete that has held back the Mill River for decades. Within days, the impoundment behind the [Hopewell Mills Dam](#) dropped, and the river began to transform, opening up fish and wildlife habitat that hadn't been available for nearly 200 years.

The **Mill River Restoration Project** involves the removal or retrofit of four dams, allowing migratory species like river herring and American eel to access an additional 30 miles of river habitat, as well as upstream lakes and ponds. Hopewell Mills Dam is first barrier that herring encounter on the Mill River as they're traveling upstream from the sea, and is the first dam to be removed from the river.

The Taunton River is one of the only free-flowing rivers in New England. Restoring fish passage to a major tributary like the Mill River will have great significance for the Taunton River system's famed river herring runs, which are among the largest in the region. Many more fish will then return to Narragansett Bay, where they are an important part of the marine food web.

Taunton's Mill River [received national attention in 2005](#), when the threat of failure at [Whittenton Pond Dam](#) – located just upstream from Hopewell Mills – forced the evacuation of downtown Taunton.

The crisis prompted the formation of the **Mill River Restoration Partnership**, as well as legislative efforts to make the removal and repair of aging dams easier for Massachusetts communities. Whittenton Dam will be removed in 2012 or 2013.

The Hopewell Mills Dam removal is expected to be completed by October. By next spring, river herring will make their run upstream. The five-acre impoundment behind the Hopewell Mills Dam will become an open, meadow-like floodplain, where such species as painted turtle, cedar waxwing and kingfisher will likely live. And perhaps, [Taunton will again be known as "Herring Town."](#)

The Mill River Restoration Partnership includes dam owners, [Southeastern Regional Planning and Economic](#)

[Development District](#) (SRPEDD), [MA Division of Ecological Restoration](#), NOAA-Restoration Center, [The Nature Conservancy](#), the Natural Resources Conservation Service, [Save the Bay](#), [American Rivers](#), US Fish and Wildlife Service, MA Division of Marine Fisheries (DMF), MA Department of Transportation (MassDOT), Mass Audubon, [Taunton River Watershed Alliance](#), and the [Massachusetts Environmental Trust](#). The design firm for the Hopewell Mills Dam removal project is [Inter-Fluve, Inc.](#), from Cambridge, MA, and the construction contractor is [RC&D](#) from Pawtucket, RI.

The above article was adapted from a [press release](#) by the Mill River Restoration Partners. Click [here](#), [here](#) and [here](#) for other news coverage of this dam removal; and **for an excellent, front seat, “blow by blow” look at the work at the Hopewell Mills Dam site, check out this [time lapse video](#) or the entries in the [Mill River Restoration blog](#)** that Save the Bay has set up to document the event. For more information about the Mill River Restoration Project, please contact River Restoration Program Manager Beth Lambert at beth.lambert@state.ma.us or (617) 626-1526.

River Instream Flow Stewards (RIFLS) update

By Laila Parker

In [past newsletters](#), we’ve written about the excellent flow restoration work in progress on **First Herring Brook in Scituate**. The Town has recently taken a number of steps that help to ensure adequate water is available for aquatic life, including upgrading their water supply infrastructure to make it more efficient, passing a restriction on lawn irrigation in the summers of 2011 and 2012, and making controlled releases from their reservoirs to allow for more natural streamflows. The benefits since then to both water supply and the brook, as well as to the aquatic organism the Brook is named for (herring), demonstrate the double win potential of flow restoration.

For example: less water demand reduces the need for water treatment and thus the use of associated chemicals, meaning Scituate saved \$67,000 in treatment costs in the summer of 2011. Reduced water demand during the summer of 2011 meant that the system had fewer water main breaks and that people living in neighborhoods with antiquated pipes got better water pressure than in typical summers. And, when Tropical Storm Irene knocked out Scituate’s power for over a week, the Water Department was able to provide water to its customers because its surface water reservoirs were still fairly full compared to a typical August. This situation would have been more challenging had the Water Department needed to rely on its emergency generators to pump groundwater for that entire week.

On top of these improvements, all partners had a deeper thrill at the news this April that volunteers had observed herring running upstream in First Herring Brook for the first time in decades (click [here](#) for more coverage of this good news story). The [Gulf of Maine Council on the Marine Environment](#)’s [2012 Sustainable Communities Award was presented to the Town of Scituate](#) this past June in recognition of and gratitude for its efforts on behalf of First Herring Brook and its eponymous anadromous fish. We look forward to continuing to work with the Town, the [North and South Rivers Watershed Association](#), and other partners on improving water conservation and returning environmental flows to First Herring Brook.

Our work in First Herring Brook and other watersheds relies, of course, on the commitment of RIFLS volunteers who read their local staff gages, in good weather and bad. But, for a few of our projects where we are interested in tracking more fine-scale variations in streamflow, we also install sensors that continuously record water level at frequent intervals (every 15 minutes, e.g.). Typically we cannot see these data until we visit the site and download the data from the sensor (one shortcoming as compared to our wonderful volunteers who regularly enter their data at our website, www.rifls.org). This summer we are trying a new approach. We installed a telemetry station in Middleton at the site of the former Curtis Pond Dam on Boston Brook, a tributary to the Ipswich River. This station transmits water level sensor data via NOAA satellites to the Internet, and we then enter one daily

measurement on www.rifls.org. Please feel free to contact Michelle Craddock with questions about this station at michelle.craddock@state.ma.us or 617-626-1544. [Click [here](#) and [here](#) to read more about the Curtis Pond Dam removal and the restoration of a free-flowing segment of Boston Brook.]



RIFLS intern Adam Weinberg and Flow Restoration Specialist Michelle Craddock install the satellite antenna for the new Boston Brook streamflow telemetry station.

Big thanks are due to the **Massachusetts Department of Environmental Protection**, who funded this telemetry flow monitoring station under a [Sustainable Water Management Initiative](#) (SWMI) pilot initiative. Danvers/Middleton is one of [four pilot communities around the state where MassDEP is evaluating the proposed SWMI regulatory framework](#).

Coastal Projects Update

Herring River, Wellfleet



Aerial view (looking north) of a portion of the Herring River Estuary in Wellfleet. The dike, acting as the main source of restricting tidal flow to the estuary, is in the foreground.

The Draft Environmental Impact Statement/Report for this [large-scale restoration project, which would restore tidal flow to an approximately 1,000 acre area in and along the Herring River estuary](#), is scheduled to be released in

October, and public informational meetings about, and a comment period on, the project are expected to be scheduled shortly thereafter. This is the largest tidal estuary restoration ever undertaken in Massachusetts and the North Atlantic coast of the United States. DER has served as a core project partner over the past decade and has contributed substantial technical and financial resources to support project development.

In the meantime, the [Friends of Herring River](#) have produced [*Return of the Tides: The Herring River Restoration Project*](#), a video developed to educate the public about the value of a healthy salt marsh estuary and the expected benefits of restoring the historic tidal flow of the Herring River Estuary. For thousands of years, this estuary was highly productive and provided feeding and nursery habitat for commercially important fish and shellfish, cycled nutrients and sediment to improve water quality, produced salt hay for animal fodder, and buffered storm surges. Then, throughout the nineteenth and early twentieth centuries, road and railroad dikes were built across the river's floodplain, bisecting the salt marshes and dramatically altering natural tidal patterns. In addition to the [group's website](#), *Return of the Tides* may also be viewed on [Vimeo](#) and (with subtitles) on an electronic bulletin board at the Beach Sticker Office in Wellfleet. [Click [here](#) and [here](#) for additional info on this project.]



Resources and Grants

Grant, Prize, Fellowship, Contest, Award, Fundraising, etc. Opportunities

(presented in rough chronological order by application/nomination/entry deadline)

The New York City-based, family-run [Heineman Foundation](#) provides seed money to start-up projects and new projects within existing organizations for a maximum of three to five years. The Foundation's areas of interest include “**environmental research that will help prevent, reduce and/or eliminate water degradation**”. Preference will be given to organizations that the Foundation has not previously funded that are located in nine states in close proximity to the trustees (including Connecticut, **Massachusetts** and New Hampshire). The average range of the Foundation's grants is \$20,000-\$50,000/year. An organization must have 501(c)(3) status and upload copies of corresponding IRS documents to the online application form in order for the application to be considered. Applications/Proposals must be submitted no later than 5:00 PM **September 1st** to be considered for funding for that year. Click [here](#) for more info and [here](#) if/when you are ready to begin the online application process.

The [Clark Fund](#), founded in 1946 by Mary Chichester duPont Clark and one of two funds administered by the [Chichester duPont Foundation](#), invites grant applicants from anywhere within the boundaries of the United States. It devotes particular emphasis to programs concerned with the **environment**, education, health care and social services and to which the Foundation's giving will play a pivotal role. Grant amounts typically range from \$10,000-\$50,000. The annual application **deadline** is **September 1** – click [here](#) for more info.

The [Richard and Susan Smith Family Foundation](#) is committed to improving the quality of life in Greater Boston. While the bulk of the Foundation's giving is in the medical, youth development and cultural enrichment fields, some grants have gone to river and/or other community improvement projects (such as the Chelsea Creek Restoration Partnership's Creekside Commons project). The Foundation's Small Capital Grants Initiative funds one-time capital expenses that directly enhance a nonprofit's ability to serve its clients. The grants range in size from \$5,000-\$50,000, and may be used for such purposes as facility improvements, vehicles, equipment purchases and other non-expendable assets. The Foundation seeks to target this assistance to smaller nonprofits that would otherwise find it difficult, if not impossible, to meet this type of need through their operating budgets. The next **deadline** for applications under the Foundation's Small Capital Grant Program is **September 13, 2012**; click [here](#) to apply or for more info.

The [Mass. Office of Coastal Zone Management](#) (MCZM) is seeking proposals for its [Coastal Pollutant](#)

Remediation (CPR) Grant Program. For Fiscal Year (FY) 2013, the CPR program will provide up to \$400,000 to municipalities located in the [Massachusetts Coastal Watershed](#) to assess and remediate stormwater pollution from paved and unpaved surfaces and to design, install, or upgrade boat pumpout facilities. As much as \$125,000 may be requested, and a 25 percent match of the total project cost is required. To view the Request for Responses (RFR), visit the [Comm-PASS website](#) and search for solicitation number ENV 13 CZM 02. Proposals are **due by September 13.**

The Mass. Executive Office of Energy and Environmental Affairs (EEA)'s [Division of Conservation Services](#) (DCS)'s **FY2013 Drinking Water Supply Protection Grant Program** provides reimbursement funding for **acquisition of land critical to protect existing and planned future public drinking water supplies**, as well as for groundwater recharge. The Request for Responses (RFR) document for the FY13 grant round is expected to be made available soon at www.mass.gov/eea/dcs-grants or www.comm-pass.com. Contact Celia Riechel at (617) 626-1187 or celia.riechel@state.ma.us for more info.

The [Forest Legacy Program](#) is a partnership between participating States and the USDA Forest Service to **identify and help protect environmentally important forests from conversion to non-forest uses**. The main tool used for protecting these important forests is conservation easements. The Federal government may fund up to 75% of program costs, with at least 25% coming from private, state or local sources. A request for proposals for the Forest Legacy Program has been announced by the USDA Forest Service, and the [Massachusetts Forest Legacy Program](#) is now **accepting project proposals for consideration in the Federal Fiscal Year 2014 appropriation process**. Forest Legacy project proposals must be entered into the "[Forest Legacy Information System](#)" (FLIS) no later than **5:00PM on September 14, 2012** for project proposals to be considered complete and eligible for review and ranking by the Massachusetts Forest Legacy Committee. The appropriate **Forest Legacy Area Sponsor must be notified by e-mail, no later than 5:00PM on September 14, 2012**, that a Forest Legacy Project Proposal has been entered into FLIS. Click [here](#) for more info (including names and Sponsor contact info for the designated Mass. Forest Legacy regions: Berkshire-Plateau; Connecticut Valley (Western Valley & Holyoke Range); Estabrook Woods (Concord and Carlisle); Nashua River Greenway; North Quabbin Corridor; Quinebaug; and Stockbridge Yokun Ridge & Taconic Range. Contact Mike Fleming at (978) 368-0126 ext. 114 or mike.fleming@state.ma.us for more info.

The **Mary Alice Arakelian Foundation** (no web page) makes grants to conservation and other charitable entities in the Newburyport, MA area and elsewhere. Grant requests should be submitted before the **September 15th deadline** to: Mark Welch, P.O. Box 695, Newburyport, MA 01950.

The [James Marston Fitch Charitable Foundation](#)'s **Mid-Career Grant Program** awards **grants to professionals working in the fields of historic preservation, landscape architecture, urban design, environmental planning, decorative arts, architectural design, and architectural history**. Fitch Mid-Career grants of up to \$15,000 are awarded annually to one or two mid-career professionals with at least ten years of experience and an academic background, professional experience, and an established identity in one or more of the eligible fields. The Foundation will consider proposals for research and/or execution of a preservation-related project in any of the eligible fields. Projects will be evaluated based on a range of criteria, including the potential for the project to make a meaningful contribution to the **academic and/or professional field of historic preservation in the United States** and the innovativeness and creativity of the planned project. Grants are awarded to individuals only (i.e., not to organizations). The **deadline** to apply is **September 15, 2012**; click [here](#) to apply or for more info.

The purpose of the [David H. Smith Conservation Research Fellowship Program](#) (a.k.a. the "[Smith Fellows](#)" program), a partnership between the [Society for Conservation Biology](#) and the [Cedar Tree Foundation](#), is "to create opportunities for leading **conservation biologists** to strengthen their skills through two years of applied post-doctoral research, supplemented by training programs, peer networking, and field learning experiences; so that they may build productive partnerships with conservation practitioners and contribute and communicate scientific knowledge to problems of critical importance in conservation. All application materials must be received by **September 21, 2012**; click [here](#) to apply or for more info.

Mass Audubon's [Picture This: Your Great Outdoors Photo Contest](#), open to all participants, invites your digital images highlighting the beauty and diversity of Massachusetts wildlife, habitats, and people in nature. Judges will select up to 18 winners (a professional, amateur, and youth in each of six categories). One Grand Prize Winner's photo will be featured in [Mass Audubon's Connections newsletter](#). The entry **deadline** is **September 30**; click [here](#) to enter or for more info. [[OARS: For the Assabet, Sudbury and Concord Rivers](#) also has a [photo contest](#) going, with the entry **deadline** of **midnight** on **September 21**; click [here](#) for more info.]

[EPA's Aging Initiative](#), Generations United, and the [Rachel Carson Council, Inc.](#), the Dance Exchange and the National Center for Creative Aging are pleased to present the finalists for the 6th annual intergenerational dance, photo, essay, and poetry [Sense of Wonder contest](#) (this year called the *Rachel Carson Sense of Water Contest*). All entries were created by a multi-generational team. You are invited to [cast your ballot](#) for your favorite entry, in each of the categories. Send your ballot or email with your favorites to aging.info@epa.gov no later than **September 24, 2012**.

The [Water Colors Contest](#), sponsored by [Plow & Hearth](#) and benefitting [American Rivers](#), is intended to raise awareness about the importance of clean water, and the actions people can take to conserve water. Now in its second year, the **Contest invites you to [upload](#) images or other artistic expressions inspired by water and colors** (click [here](#) to see examples). You can submit photos of rain barrels, water bottles or watering cans you've painted; poems or stories about water; photos of the creative ways you've planted your garden; drawings of rivers – anything that captures the spirit of Water Colors. Entries will be judged on aesthetic impact, incorporation of color and water and originality. Entries are being accepted through **September 30**. At that time, a special Plow & Hearth committee will select the top three to five finalists from all entries. You can then vote for your favorite on [Plow & Hearth's Facebook page](#).

The [Harold Whitworth Pierce Charitable Trust](#) offers grants primarily for projects that will produce long-range benefits through leverage of the Trust's resources. Grants are made for specific programs, for "seed money", and for capital projects, especially those which can reduce operating costs. Occasional grants are made for operating support. Grants are focused on institutions and programs in the Boston area. Topic areas for which the trustees invite Preliminary Letters include **Green and Public Spaces** (i.e., projects which support community gardens, community parks and other natural areas; and projects which enhance open space for active and/or passive recreation); and **environmental research** on issues affecting New England. While the Trust's semi-annual **deadlines** for submitting Preliminary Letters are March 1 and **September 30**, it is strongly suggested that you first contact Betsy Nichols, Program Director. Betsy may be reached on Tuesdays and Thursdays at (617) 523-8368 or may be reached by email most days at piercetrust@nichols-pratt.com. Click [here](#) for more info.

The Somerville, MA-based organization [RESIST](#) offers support to grassroots groups engaged in activist organizing for economic, social, and **environmental justice** in the United States. Grants of \$300 to \$4,000 are provided to small budget groups. RESIST's interests include **community organizing** and **environmental protection**. The next **application deadline** is **October 5, 2012**. Click [here](#) to apply or more info; interested applicants are encouraged to call the RESIST office [(617) 623-5110] before applying.)

The [Massachusetts Bays National Estuary Program](#) (MBP) is pleased to announce the availability of up to \$100,000 in total funding through the **FY13 MBP Research and Planning Grant Program**. Through this program, MBP will provide individual grants of up to \$20,000 for **estuarine protection and restoration initiatives located within the [50 coastal communities that comprise the MBP planning area](#)**. Projects funded by this grant program include applied research, planning, or capacity building initiatives that assist MBP in implementing priority action items identified in its [2009-2012 Strategic Plan](#). Priority Action Items include: (1) protecting and enhancing coastal habitat, (2) reducing and preventing stormwater pollution, (3) protecting and enhancing shellfish resources, (4) managing local land use and growth, (5) managing municipal wastewater, (6) managing marine invasive species, (7) monitoring marine and estuarine waters, and (8) adapting for the projected impacts of climate changes. Eligible

applicants include Massachusetts cities, towns, and other public entities, academic institutions, and certified 501(c)(3) non-profit organizations. Project proponents must provide a minimum of 25% match of the total project cost (cash and/or in-kind). Applications are **due on Friday, October 5, 2012**. To view the Request for Responses (RFR), go to www.comm-pass.com, click on “Search for a Solicitation”, then enter **ENV 13 CZM 03** into the “Keywords” box. Contact Ms. Prassede Vella at (617) 626-1217 or Prassede.Vella@state.ma.us for more info.

The [Massachusetts Environmental Trust](#) recently announced that its **FY2014 General Grants RFR** is now open. **Letters of inquiry** for this round are **due on** (i.e., must be **received by**) **October 12, 2012** for projects that will begin in July 2013. To access the Request For Responses (RFR) document, go to <http://www.comm-pass.com>, click on “[Search for A Solicitation](#)”, and then enter **EEA 13 MET 01** into the “Keywords” box. You may also have a copy of the RFR e-mailed directly to you. To do that, or for any other questions, contact MET Administrator Bill Hinkley at (617) 626-1177 or william.hinkley@state.ma.us.

A collaborative effort between [EarthEcho International](#) and the [NEA Foundation](#), the [Water Planet Challenge Grant Program](#) supports student service-learning programs designed to help improve the health of our water planet. The \$2,000 grants are available in the form of [NEA Foundation Student Achievement Grants](#) to middle and high school public educators. Interested applicants must cite specifically how they are utilizing EarthEcho’s [Water Planet Challenge Action Guides](#) in the classroom with their students (see, e.g., [Know Your Flow: An Action Guide for Water Efficiency](#)). The next application **deadline** is **October 15**; click [here](#) and [here](#) to apply or for more info.

[NOAA’s Bay Watershed Education and Training \(B-WET\) Grant Program](#) supports environmental education through locally relevant experiential learning for K-12 students. Applicants are asked to use best-practices that are deemed to be “[meaningful watershed educational experiences](#)” (MWEES). Funded projects will provide MWEES for students and related professional development for teachers. The [B-WET New England Program](#) recently announced the availability of FY13 funding (up to \$300,000 is anticipated to be awarded among four to eight projects in the region during FY 2013). The application **deadline** is **October 22, 2012**. Click [here](#) or contact Colleen Coogan [Colleen.Coogan@noaa.gov or (978) 281-9181] or Deirdre Kimball [Deirdre.Kimball@noaa.gov, (978) 281-9290] for more info.

The [North American Wetlands Conservation Act](#) (NAWCA) provides matching grants to organizations and individuals who have developed partnerships to carry out **wetlands conservation projects** in the United States, Canada, and Mexico for the **benefit of wetlands-associated migratory birds and other wildlife**. There is a Standard and a [Small Grants Program](#). Although the FY12 Standard Grants deadline has passed, the [NAWCA small grants](#) (up to \$75,000 in grant funds) **deadline** isn’t until Thursday, **October 25, 2012**. Grants are available to partners who can provide at least a 1:1 in non-federal match in support of **wetland and associated upland habitat protection, restoration and enhancement**. [Atlantic Coast Joint Venture](#) staff (contacts below) are available to help you assess the competitiveness of a project, provide information on bird conservation plans and priorities in your area and develop grant applications. Please contact one of them soon if you are considering submitting an application or if you have any questions. The [ACJV staff contacts for Massachusetts](#) are Mitch Hartley [(413) 253-8779, (413) 253-8424 (fax), Mitch_Hartley@fws.gov] or Debra Reynolds [(413) 253-8674, (413) 253-8424 (fax), Debra_Reynolds@fws.gov].

[Northeast SARE \(Sustainable Agriculture and Research and Education\)](#)’s [Sustainable Community Grants Program](#) makes a direct connection between **community revitalization** and farming. Projects must address specific key issues such as farm finance, marketing, **land use, water use**, enterprise development, value-added product development, or other delineated topic areas. To apply, you must be affiliated with Cooperative Extension, a municipality, a state department of agriculture, a college or university, a community organization, or other institutional entity. The **application deadline** for a 2013 grant is **November 15, 2012**; click [here](#) to apply or for more info.

The [Bay and Paul Foundation](#)’s [areas of interest](#) include service learning, Native Americans and endangered species research and conservation. Click [here](#) to apply or for more info. Proposals should be addressed to Fred

Bay, President and CEO, and submitted by mail to The Bay and Paul Foundations, 17 West 94th Street, 1st Floor, New York, NY 10025. Proposals submitted should be postmarked by the following deadlines (or the next business day if the date falls on a weekend or holiday) in order to be reviewed for scheduled board meetings: March 1 for the May meeting, September 1 for the November meeting, and **December 1** for the February meeting.

The St. Louis-based [Enterprise Holdings Foundation](#), the main philanthropic arm of the [Enterprise](#) car rental business, makes grants to a large number of charitable recipients throughout the U.S. and beyond. Click [here](#) to read the Foundation's history and grant guidelines, [here](#) for how to submit a request (the next **deadline** is **December 1, 2012**) and [here](#) to read the Grant FAQ. [N. B.: The Foundation generally accepts requests for donations only from Enterprise employees and their spouses, and established Enterprise customers who use the company's services on a regular basis; and the requestor must be personally and actively involved in the organization – perhaps you or someone you know falls into one of those categories.]

One of the funding categories for the [Kresge Foundation's Environment Program](#) is "[Fostering the development of place-based adaptation strategies](#)": locally-generated strategies that will build the resilience of human and ecological communities as climate changes. The Foundation supports place-based initiatives to develop innovative approaches to preparing for an uncertain climatic future, and initiates, funds and propagates model processes that engage local stakeholders in shaping strategies that will contribute to more resilient human and natural systems. In addition, the Foundation targets strategic issues that have implications for both people and nature. These include water-resource management, the protection of biodiversity-rich and emblematic ecosystems, and urban adaptation planning and implementation. While the Environment Program primarily accepts grant requests by invitation, if your organization's work is consistent with the Foundation's goals, you may submit a [preliminary application](#) as a means of letting them learn about your activities. [The Foundation also [recently announced](#) a new grantmaking initiative in the area of "**creative placemaking**": helping communities use arts and culture to create healthy, vibrant places; click [here](#) for more info.]

One of the four focus areas of the [CSX Corporation's Corporate Giving Program](#) is "**Environment**". The railroad company supports programs that: protect air, land and water resources in the communities in which it operates (click [here](#) for info on CSX's extensive facilities in Massachusetts); preserve natural resources; and teach environmental stewardship to children and adults. Requests for funding may be submitted at any time. Click [here](#) to apply online or for more info, including the [giving guidelines/eligibility](#) and [FAQ](#) page.

The mission of the [Oram Foundation's Fund for the Environment & Urban Life](#) is "to support projects and programs with promise of significant local or broader-reaching impacts on environmental quality and urban life. The Fund is particularly interested in supporting: "social entrepreneurs" whose energy and passion can make visions happen; endeavors that integrate efforts of the public, private and non-profit sectors; and communications programs (e.g., media) that will create wider awareness of environmental and urban issues, innovations, solutions, and behavior change. See the Fund's [mission statement](#), [areas of interest](#), and [overview of proposals](#) to see if there might be a good fit with your organization and its activities, and (if so) click [here](#) to proceed.

Most grants made by the New York City-based **AKC Fund** are to organizations engaged in education, **conservation and preservation**, health and welfare and located in the **Northeast U.S.** Groups seeking funding should send a letter outlining the project for which funds are being sought, and asking if a full proposal should be submitted. Send requests at any time to: Emily Grand, Administrator, AKC Fund, Inc., c/o GHS Philanthropy Management, 6 West 48th St., 10th Floor, New York, NY 10036. Telephone: (212) 812-4362.

The **Henry T. Wiggin Charitable Trust** (no web page) makes "general purposes" and other grants to conservation and other organizations, primarily in Massachusetts. Groups seeking funding should direct requests to: James L. Smithson, Esq., Tyler & Reynolds, P.C., 77 Summer St., Boston, MA 02110. Telephone: (617) 695-9799. Requests should include a general description of the project or purpose for which funding is sought, along with a statement of need. There are no specific application forms or deadlines.

The **C. Leroy Miller Charitable Foundation** (no web page) makes grants to environmental groups and to support outdoor and other educational activities, primarily in Massachusetts. Groups seeking funds should send a letter at any time stating the

activities for which funds are requested. Send it to: Melissa Abbot, C. Leroy Miller Charitable Foundation, 8 Pointe Rok Drive, Worcester, MA 01604.

The **Frank Gerrity Charitable Trust** (no web page) makes small grants to a number of charitable recipients in Massachusetts and elsewhere. Groups seeking funding should send a request to: Trustees of the Frank Gerrity Charitable Trust, P.O. Box 9111, 90 Oak St., Newton Upper Falls, MA 02464-9111. Telephone: (617) 928-3330. There are no specified application forms or deadlines.

The **Jebediah Foundation** (no web page) makes small grants to a number of conservation, arts and other organizations in Massachusetts and elsewhere. Groups seeking funding should direct requests to: David Silvian, Jebediah Foundation, c/o Bingham McCutchen, 1 Federal St., Boston, MA 02110. There are no specific application forms or deadlines.

While most of the grants made by the **Linde Family Foundation** (no web page) have gone to arts- and education-related programs, primarily in Greater Boston and the Berkshires, the Foundation has made a few conservation-related grants, and is open to new requests for funding. Groups seeking funding should contact the Foundation c/o Mott Philanthropic, Prudential Tower, 800 Boylston St., Suite 1560, Boston, MA 02199. Telephone: (617) 927-5700.

The **Caswell Foundation** (no web page) makes grants to conservation and other organizations in Massachusetts and elsewhere. Groups requesting funding should do so (at any time) in the form of a letter stating the purpose for which funds are sought, as well as the amount requested. Send it to: Dorothy D. Caswell, Caswell Foundation, 10 White Oak Drive Z228, Exeter, NH 03833. Telephone: (603) 580-1207. The Foundation may then request additional financial information from you.

The **Winfield Foundation** (no web page) makes grants to conservation and other groups and projects in New England and elsewhere. Organizations seeking funding should submit a written request at any time, including: a list of officers and directors; brochure; stated goals; indication of sources of and uses of funding; and letter from the IRS confirming the group's tax-exempt status. Send it to: Helen Hooke, c/o Hollyer Brady LLP, 60 East 42nd St., Suite 1825, New York, NY 10165.

Most of the grants made by the Pennsylvania-based **Allerton Foundation** (no web page) go to **organizations and projects that benefit animals or wildlife**. Groups seeking funding should visit the [Lenfest Foundation](#)'s web page (a related but different foundation) and follow the same format. Funding requests should be submitted to: The Allerton Foundation, 5 Tower Bridge, 300 Barr Harbor Drive, Suite 450, West Conshohocken, PA 19428. Telephone: (610) 828-4510.

The New York-based **William C. Dowling Foundation** (no web page) makes grants for conservation and other purposes in the Northeast U.S. and elsewhere. Requests for funding should be submitted in writing and include a description of the organization, the purposes for which funds are sought, and proof of its tax-exempt status. Send to: John T. Evans, Trustee, Dowling Foundation, 61 Broadway, New York, NY 10006. Telephone: (212) 344-3900.

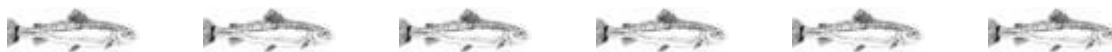
The **Maple Hill Foundation** (no web page) makes grants to conservation and other groups in Massachusetts and elsewhere. Groups seeking funding should submit a written letter describing the nature of the charitable organization and proof of its federal tax-exempt status. Send it to: E. Warren Miller, Maple Hill Foundation, c/o Miller Associates, 100 Front St., Suite 950, West Conshohocken, PA 19428. Telephone: (610) 941-5011.

The **Harriet Ford Dickenson Foundation** (no web page) makes grants for conservation and other purposes, primarily in New York and New England. Groups seeking funding should send a letter request at any time stating the amount of funding sought and the purposes for which it will be used. Send the letter to: Mr. James Largey, V.P., Harriet Ford Dickenson Foundation, c/o J.P. Morgan Chase Bank, N.A., 270 Park Ave., New York, NY 10006. Telephone: (212) 464-1937.

The Delaware-based **Fair Play Foundation** (no web page) makes grants to conservation organizations and projects, primarily in the mid-Atlantic area but occasionally elsewhere (including New England). Groups seeking funding should send a letter explaining your funding needs to: Blaine T. Phillips, Jr., Executive Director, Fair Play Foundation, 100 West 10th St., Suite 1010, Wilmington, DE 19801. Telephone: (302) 777-4711. There are no specified application forms or deadlines.

The Iowa-based **Fred & Charlotte Hubbell Foundation** (no web page) makes grants for conservation and other purposes, primarily in Iowa but is open to proposals from elsewhere. Groups seeking funding should send a letter at any time describing the project or purpose for which funds are sought, the amount requested, and proof of the group's §501(c)(3) tax-exempt status. Send it to: M. Nussbaum-Bell, Fred & Charlotte Hubbell Foundation, 453 7th St., Des Moines, IA 50309. Telephone:

Last but not least: if you are considering seeking funding from any of the above (or any other) foundations, it might be well worth your while to read the new book [*The Ultimate Insider's Guide to Winning Foundation Grants: A Foundation CEO Reveals the Secrets You Need to Know*](#). Click [here](#) to read an excerpt and [here](#) to read an interview with the book's author, Marvin Teitel. [See also the recently-published [*The Foundation Center's Guide to Proposal Writing, 6th Edition*](#).]



Calendar

(sorted chronologically by date of event, submission deadline, etc.)

The [Housatonic River Walk](#) will be celebrating its [25th Anniversary with a Riverside Festival](#), scheduled to take place on **Saturday, September 8** from 10:00 AM – 1:00 PM at the W.E.B. Du Bois River Garden Park, Church and River Streets in Great Barrington. View the new outdoor exhibit *W.E.B. Du Bois: Champion of Rivers Here at Home and Around the World*, participate in the “Our Town” [Raffle](#) and enjoy refreshments. Click [here](#) or [here](#) for more info.

Everyone is invited to participate in the [3rd Annual Great Stone Dam Classic Canoe, Kayak, and SUP \(Stand-Up Paddle\) Race](#), which will be held on the Merrimack River on **Sunday, September 9th** at the [Abe Bashara Boathouse in Lawrence](#). Race distances and boat classes will be provided to accommodate every ability, and free boat “rentals” will be available on a first come/first served basis. All race proceeds benefit the [Greater Lawrence Community Boating Program](#) and the Lazarus House food pantry. Click [here](#) to sign up or for more info.

[COASTSWEEP](#), the state-wide beach cleanup sponsored by the [Mass. Office of Coastal Zone Management](#) (MCZM) and UMass/Boston’s [Urban Harbors Institute](#), will be celebrating its 25th anniversary this **September and October**. Volunteers throughout Massachusetts turn out in large numbers each year for this event, which is part of an international campaign organized by The [Ocean Conservancy](#) in Washington, DC. Participants all over the world collect trash and other marine debris and [record what they find](#), and this information is used to help reduce future marine debris problems. For the 25th anniversary, the goal is to clean up every coastal beach in Massachusetts! All the cleanup supplies (bags, gloves, data cards, pencils, etc.) are provided free of charge, and cleanup events are being scheduled throughout September and October (click [here](#) to access the current list, organized geographically by region). Click [here](#) for more info, or check out COASTSWEEP on [Facebook](#) or [Twitter](#).

Protecting habitat for endangered species and other wildlife can be done cost-effectively and creatively, meeting needs of landowners while protecting important natural resources. In the workshop [Defusing Landowner and Conservation Conflicts](#), scheduled to take place on **Thursday, September 13, 2012** from 7:00 PM – 9:00 PM at Mass. Audubon’s [Wellfleet Bay Wildlife Sanctuary](#), Eve Schluter, Endangered Species Review Biologist, [MA Natural Heritage and Endangered Species Program](#), will provide an overview of the revised Massachusetts Endangered Species Act regulations and the Eastern Box Turtle Conservation Plan. Kurt Gaertner, MA Executive Office of Energy and Environmental Affairs, will present the state’s new model Open Space Design bylaw, and discuss how local land use tools such as Open Space Design can be applied in concert with state regulations to promote attractive, sustainable developments while protecting wetlands, water supplies, and important habitats. While the [workshop](#) is free, pre-registration is required; [register online](#) or call (508) 349-2615 to register by phone.

Hall’s Pond is one of two natural ponds remaining in Brookline. The [Hall’s Pond Sanctuary](#) contains diverse ecosystems including a pond, wetlands, an upland area, a formal garden area, and a short trail around the pond with wetland overlooks. The sanctuary has undergone major landscape renovation featuring restoration in the uplands to remove invasive plant species and replant with native species. At [Landscape Restoration: Hall's Pond Sanctuary](#), a workshop sponsored by the [Ecological Landscaping Association](#) (ELA) and taking place on

Thursday, September 13 from 1:00 PM - 3:00 PM, Brookline Conservation Administrator Tom Brady and Landscape Designer Ellen Forester will give a tour of this urban oasis and explain the restoration efforts that have transformed Hall's Pond and created the thriving habitat, improved water quality, and beautiful native plant gardens. Click [here](#) to sign up or for more info.

To help commemorate the [40th anniversary of the Clean Water Act](#), the **U.S. EPA** is asking people to send in a **15-second video clip** about the important role that water plays in their life. Each video should include the phrase "Water Is Worth It", but the rest is up to you. EPA will post selected videos on its website and Facebook page. Fill out a video entry form, and submit your entry as a video response to the [promotional video on EPA's YouTube page](#). Click [here](#) to enter or for more info. Video submissions must be received by **September 14, 2012**.

In furtherance of its mission to "preserve, celebrate and share with others, our regional historic, cultural, scenic and natural heritage of the 29 towns that lie within the upper Housatonic River watershed area, from Kent, Conn. to Lanesborough, Mass.", the [Upper Housatonic Valley National Heritage Area](#) will be offering its 11th annual [Heritage Walks Weekends](#) on Saturday and Sunday, **September 22-23** and **October 13-14, 2012**. The "Heritage Walks" events include educational walking tours through historic estate gardens, nature walks and trail hikes, tours of industrial-site ruins that were once thriving industries, a canoe trip on the Housatonic River, bike rides along scenic country roads, a Native American village walk, and the "[Berkshire Bioblitz](#)". Click [here](#) for a complete listing and description.

Not to be outdone, the [Essex National Heritage Area](#) (ENHA) will be hosting its 11th annual [Trails & Sails: Two Weekends of Walks and Water](#) event on **September 21-23** and **September 28-30, 2012**. Explore Essex County's cultural, historic and natural sites at 150+ free events over the course of these two weekends. Enjoy a variety of guided tours, open house visits, hikes, walks, sails, paddles, and other special experiences for all ages, skill levels and interests. All events are located within the 34 cities and towns of Essex County including the communities of Salem, Gloucester, Newburyport, Andover, Saugus and many more. Click [here](#) for event details in electronic form, or pick up a printed guide at one of the [ENHA visitors centers](#).

[National Public Lands Day](#) (NPLD) is the nation's largest, single-day volunteer event for public lands. This year's event will take place on **Saturday, Sept. 29, 2012**. Click [here](#) to add your organization's public lands-focused event added to the NPLD listings, or [here](#) to find already-listed NPLD events you may want to participate in (click [here](#) for current NPLD listings for events taking place in **Massachusetts**).

The [Massachusetts Chapter of Clean Water Action](#) will be celebrating the **40th anniversary** of the organization at a [Garden Party](#) at [Garden in the Woods](#) in Framingham on **Sunday, September 30** from 3-5 PM. Click [here](#) to sign up or for more info.

Now in its 22nd year, [The Last Green Valley](#) (TLGV, formerly known as the [Quinebaug and Shetucket Rivers Valley National Heritage Corridor](#))'s 2012 [Walktober](#) celebration is a compilation of more than 100 walks, paddles and other events highlighting the cultural, natural and historic assets of the TLGV region in northeast Connecticut and south central Massachusetts taking place during the month of **October**. Click [here](#) to download the *Walktober* brochure.

[OIA Rendezvous 2012](#), the annual conference of the [Outdoor Industry Association](#), will be taking place at the [Hyatt Regency Downtown](#) in **Boston** from **October 3-5, 2012**. Click [here](#) to view the program and [here](#) to see who's already signed up to take part in the Rendezvous.

[Cape Cod Pathways](#) is an initiative coordinated by the Cape Cod Commission that is partnering with Barnstable County and working with citizens and organizations from across Cape Cod to create a [Capewide network of walking trails](#). Cape Cod Pathways hosts an annual [Cape Walk](#) in June and [Walking Weekend](#) in October to highlight these walking opportunities. This year's Walking Weekend is scheduled to take place from **October 5-8, 2012**; click [here](#) for more info.

The [2012 Watershed and Stormwater Conference](#), sponsored by the [Center for Watershed Protection](#) (CWP) and the [Association of Watershed and Stormwater Professionals](#) (AWSPs) will be taking place from **October 8-10, 2012** at the Baltimore Marriott Waterfront. Attendees will hear about the latest and emerging practices in watershed management through interactive educational sessions; engage, network, and discuss these topics with other practitioners, regulators, scientists, educators, and advocates; and celebrate the CWP's 20-year anniversary. Click [here](#) for more info and [here](#) to see the list of speakers. [The AWSPs is also [currently soliciting short articles \(5,000 words or less\) for the Spring 2013 issue of its Watershed Science Bulletin](#), focusing on the use of green infrastructure and its impact on environmental, social and economic aspects of watershed and community health. Click [here](#) for Instructions for Authors and [here](#) for an article submission form; the **deadline** is **October 5, 2012**.]

With the [impending promulgation](#) of federal [Trail Accessibility Guidelines](#), communities and land trusts need to know how to sustainably build hiking trails that provide access for everyone. The [Sustainable Trails for All Conference](#), scheduled to take place from **October 10-11, 2012** at [Crotched Mountain](#) in New Hampshire, will help you understand the guidelines and will provide an overview of the techniques and hands-on skills needed to build sustainable hiking trails that provide enjoyment for all. Click [here](#) or [here](#) to register or for more info.

The [Ipswich River Watershed Association](#) (IRWA) has scheduled its **2012 Annual Meeting** to take place from 4:00 PM – 6:00 PM on **Saturday, October 13**. The meeting provides an opportunity to meet IRWA's new Executive Director, Wayne Castonguay as well as celebrate IRWA's annual Volunteer Awards and recognize and thank IRWA's River Stewards. The meeting is free and open to the public; click [here](#) for more info.

The [Clean Water America Alliance](#) will host the [Urban Water Sustainability Leadership Conference](#) from **October 15-17** in Cincinnati, OH. "Water is shaping our communities and defining our future like never before," explains [Ben Grumbles](#), president of the Alliance. "Our urban water conference provides a national forum for water collaboration and sustainability." Spotlight Cities from Cleveland, Denver, Kansas City, Syracuse, and Tucson will present cross-agency, cross-sector, community and business leader panels to share their models of creative integration and innovation for green infrastructure and resource recovery. The Leadership Conference will connect the dots among water, land use, parks, forests, transportation, energy, agriculture, and other sectors around a goal of revitalizing cities with multi-benefit projects that produce triple bottom-line results. Click [here](#) to register or for more info.

[Moving Together 2012](#), the [Mass. Department of Transportation \(MassDOT\)](#)'s annual statewide walking and bicycling conference, will be taking place on **Wednesday, October 17** at the Boston Sheraton Hotel. The conference brings together local, state, regional and national officials, community leaders, planners, engineers, landscape architects, public health experts, environmental professionals, walking and bicycling advocates, educators, and consultants from throughout Massachusetts. This year's focus is on promoting healthy transportation options and will feature [GreenDOT](#), MassDOT's comprehensive sustainability policy that promotes the healthy transportation modes of walking, bicycling and transit. Click [here](#) or [here](#) to register or for more info.

[River Network](#) recently issued a [Call for Workshops](#) for [River Rally 2013](#), scheduled to take place in St. Louis from May 17-20, 2013. The submission **deadline** is **October 18, 2012**; click [here](#) for more info.

The [5th Annual Northeast Wildlife Trackers Conference](#) is scheduled to take place on **October 20, 2012** at the [Doyle Conservation Center](#) in Leominster. Click [here](#), [here](#) or contact [Jane Winn](#) for more info.

The [Mystic River Watershed Association](#) (MyRWA) is culminating its [fortieth year of existence](#) with a [40th Anniversary Celebration & Annual Meeting](#), taking place on **Thursday, October 25, 2012** at [Anthony's of Malden Restaurant](#) in Malden. The keynote speaker will be **Tim Purinton**, Director of the Division of Ecological Restoration, Mass Dept. of Fish and Game. Special awards, birthday cake, music, a silent auction and other fun activities are also planned for this event; click [here](#) for more info.

Created by USA WEEKEND Magazine and celebrated each year on the 4th Saturday in October, the [2012 Make A Difference Day](#) will take place on **Saturday, October 27**. Helping others on Make A Difference Day – and submitting your project for award consideration – gives your favorite charity a chance to receive a \$10,000 donation from Newman’s Own. USA WEEKEND Magazine will feature 10 National and three City Award honorees in a special April 2013 issue coinciding with National Volunteer Week, led by Points of Light Institute. Award honorees will receive their awards that month at an event in Washington, D.C. Click [here](#) for more info, or visit the [Make A Difference Day’s online project database](#) to input your group’s projects or look for volunteer opportunities.

[Roads and Water: Maintenance & Protection](#), the Fall Conference of the [Massachusetts Association of Conservation Commissions](#) (MACC), is scheduled to take place on **Saturday November 10, 2012** from 8:00 AM – 12 noon at Clark University in Worcester. Topics to be covered include: the regulatory process and procedures for road maintenance projects; maintaining rural roads; working with the MA Department of Transportation; and emergency road repairs and exemptions. Click [here](#) for more info.

The **U.S. EPA** has launched a new design competition called the [Campus RainWorks Challenge](#) to encourage student teams on college and university campuses across the country to develop innovative approaches to stormwater management. The competition will help raise awareness of green design and planning approaches and train the next generation of landscape architects, planners and engineers in green infrastructure principles and design. Registration for the Campus RainWorks Challenge **opens September 4**, and **entries must be submitted by December 14, 2012** for consideration. Winning teams will earn a cash prize of \$1,500 - \$2,500, as well as \$8,000 - \$11,000 in funds for their faculty advisor to conduct research on green infrastructure. Click [here](#) to enter or for more info.

On-line Resources

[River Stories](#), recently-launched via a collaboration between the **National Park Service** and **American Rivers**, is “a dynamic collection of photos, video, and natural and cultural information about [water trails](#). Like hiking trails, these water trails help connect to each other, to nature, and with past and future generations. The stories are woven together to take you on unique adventures by water, highlighting wildlife and land, the abundance of recreational opportunities, and the ways that people are making a difference along the rivers. It is hoped that these stories inspire you to get out on the water so that you can create your own story and help you explore the larger world of [water trails](#) that await you. [The term “water trail” is more or less synonymous with “blue trail” or “blueway”. Click [here](#), [here](#), [here](#) or [here](#) to read about the [recent announcement by U.S. Secretary of the Interior Ken Salazar of the Connecticut River Watershed as the nation’s first designated National Blueway](#). Click [here](#) to learn about the [Millers River Blue Trail](#), [here](#) to visit the web page for the [Quinebaug and Shetucket Rivers Water Trail System](#) in CT and MA, and [here](#) for an update on the [Explore RI](#) web page, which covers blueways and greenways in the Ocean State, some of which extend into [Massachusetts](#).]

The [U.S. Geological Survey \(USGS\)’s WaterAlert service](#) sends e-mail or text (SMS) messages to a computer/mobile phone/tablet when [certain parameters](#) (such as [streamflow](#)), as measured by a USGS real-time data-collection station, exceed (i.e., go above or below) user-definable thresholds. All you need to do to [subscribe to this service](#) is to identify the state (such as [Massachusetts](#)) the location you want info from is located, then select a location where USGS is gathering data (such as a [stream gage](#), e.g., the [Quinsigamond River in Grafton, MA](#)), then, for that location, click on “Water Alert”, and then follow the [subscribe request instructions for that data location](#). This automated service is a very useful tool for, e.g., watershed associations, stream teams, water suppliers and others wishing to be alerted to low-flow conditions in streams, which may in turn prompt (if not require) the imposition of restrictions on outdoor watering. Click [here](#) if you need help in creating or managing your WaterAlert subscription. The related [USGS StreaMail](#) system provides a method for you to query a USGS gaging site via email, cell phone text message, or handheld device for gage height and streamflow. Send your request to StreaMail and in a few minutes you will get a reply showing the latest river stage and streamflow. This is a very useful service for paddlers in the field (assuming your device is able to pick up a signal).

The **restoration and maintenance of passage for aquatic organisms at road-stream crossings** is a significant priority and activity for natural resource, transportation and other agencies and entities. Passage at hundreds of crossings in the U.S. has been restored in recent years, primarily by replacing barrier road culverts with bridges or stream- and fish-friendly culverts designed to pass all species and all life stages of aquatic life while accommodating natural hydro-geomorphic processes. [***Aquatic Organism Passage at Road-Stream Crossings – Synthesis and Guidelines for Effectiveness Monitoring***](#), recently published by the USGS, seeks to provide answers to two questions: (1) Are current design standards for stream simulation culverts adequately re-establishing passage for aquatic biota? And (2) How do we monitor and evaluate effectiveness of passage restoration? The report outlines basic methods for evaluating road-stream crossing passage impairment and restoration and discusses under what circumstances and conditions each method will be useful; what questions each method can potentially answer; how to design and implement an evaluation study; and points out the fundamental reality that most evaluation projects will require special funding and partnerships among researchers and resource managers. /Click [here](#) to read the abstract and [here](#) to download the report in .pdf format.

Interest in **wetland plants** comes from all levels of government, academia, the private sector, and non-profit organizations. The [U.S. Army Corps of Engineers](#) (ACOE) recently updated the [***North American Digital Flora: National Wetland Plant List***](#) (NWPL). The NWPL (and the information implied by its **wetland plant species status ratings**) is used extensively in wetland delineation, wetland restoration and research, and the development of compensatory mitigation goals, as well as in providing general botanical information about wetland plants. The nomenclature, distribution, and biological data presented here represent a collaborative effort between the participating Federal agencies and the [Biota of North America Program](#) (BONAP). The NWPL 2102 plant lists are [downloadable by ACOE Region and State](#). Click [here](#) to download a .pdf file of the **NWPL listings for Massachusetts** (this is sorted A-Z by botanical name; [download the Excel version of the list](#) in order to sort A-Z by common name). Click [here](#) for more info on the NWPL and its recent update.

Are you a recreational angler and want to learn about **fish consumption advisories in your area**? Do you work in a fish advisory program at the state, territorial, tribal or local government level? The **U.S. EPA** recently made available [three redesigned, interactive online search and mapping tools](#) that allow users to perform more advanced searches of fish advisory and fish tissue data in the **National Listing of Fish Advisories database**, most recently reported data from 2010. The search tools include a “where you live” basic search for advisories issued for water bodies in the state and local area, and two advanced interactive maps and searches for technical users to obtain more detailed information. Click [here](#) or contact Jeff Bigler at (202) 566-0389 or bigler.jeff@epa.gov for more info. [Click [here](#) and [here](#) for **Massachusetts fish advisory info** posted by the [Mass. Executive Office of Health and Human Services](#).]

The EPA recently published a [new web page on harmful algal blooms](#) to help inform states, tribal and local governments, other federal agencies, and the public about key issues regarding [cyanobacteria](#), or blue-green algae, blooms in recreational waters and drinking water. Harmful algal blooms cause fouling of beaches and shorelines, economic and aesthetic losses, taste and odor problems in drinking water, and direct risks to human, fish and animal health. The web page includes information on the causes of bloom occurrence, prevention and mitigation measures, adverse human health effects from exposure to cyanotoxins (toxins from blue-green algae), ecological effects, sampling and detection methods, policies and guidelines, past and ongoing research, and links to other sites with information on algal toxins in freshwater.

The [U.S. EPA’s Healthy Watersheds Initiative](#) (HWI) is intended to protect the Nation’s remaining healthy watersheds, prevent them from becoming impaired, and accelerate restoration successes. It encourages interested states to take a strategic, systems approach to protecting healthy watersheds that recognizes the dynamic and interconnected nature of aquatic ecosystems. HWI’s recently released [***The Economic Benefits of Protecting Healthy Watersheds***](#) describes studies that demonstrate protecting healthy watersheds can reduce capital costs for water treatment plants and reduce damages to property and infrastructure due to flooding, thereby avoiding future

costs. Other examples referred to in the fact sheet show that protecting healthy watersheds can generate revenue through property value premiums, recreation, and tourism. Lastly, the fact sheet directs readers to important resources to learn more about the substantial efforts to monetize ecosystem services from across the country. Click [here](#) for more info and [here](#) to download a copy of the fact sheet in .pdf format.

EPA recently released a new technical resource to **improve stream assessment and restoration for watershed practitioners**. [***A Function-Based Framework for Stream Assessment and Restoration Projects***](#) lays out a framework for approaching stream assessment and restoration projects that focuses on understanding the suite of stream functions at a site in the context of what is happening in the watershed. The framework is an expansive resource covering **watershed and river corridor processes**, and the document provides several hypothetical examples and a detailed discussion of how the framework could be used to develop and assess stream restoration projects. Click [here](#) to download a copy of this document in .pdf format. Since this document provides a new framework, it will benefit from **additional review, comments, and example experiences and applications**. **Please share these with the authors** so the concepts, examples and templates can be revised and expanded. Contact any one of the following: Will Harman, lead author [wharman@stream-mechanics.com, (919) 747-9448]; Brian Topping, EPA project sponsor [topping.brian@epa.gov, (202) 566-5680]; or Rich Starr, USFWS project sponsor [rich_starr@fws.gov, (410) 573-4583].

The EPA recently updated the online version of its [***Water Quality Standards Handbook***](#) to make it more user-friendly and provide links to EPA's most recent policy documents. The "updated information" boxes found throughout each chapter have been updated with new links, and documents referenced in the text are now hyperlinked. EPA has also expanded its online [Policy & Guidance: Reference Library](#) to include currently relevant water quality standards policy and guidance documents. [Click [here](#) to download flyer-to-poster-sized outreach materials prepared by the EPA entitled "**Healthy Waters Start with Water Quality Standards**"; the graphics leave room for your organization to add its own locally-oriented outreach info.]

The EPA recently issued a new framework to **help local governments meet their Clean Water Act obligations**. The [***Integrated Municipal Stormwater and Wastewater Planning Approach Framework***](#) assists EPA regional offices, states, and local governments to develop voluntary storm and wastewater management plans and implement effective integrated approaches that will protect public health by reducing overflows from wastewater systems and pollution from stormwater. EPA's framework outlines new flexibility to pursue innovative, cost-saving solutions, like [green infrastructure](#), and will help communities as they develop plans that prioritize their investments in storm and wastewater infrastructure. Click [here](#) for more info.

Speaking of which: The EPA has released a [***series of six fact sheets on incorporating green infrastructure measures into National Pollutant Discharge Elimination System wet weather programs***](#). The series builds upon existing EPA authority, guidance and agreements to describe how EPA and state permitting and enforcement professionals can work with permittees to include green infrastructure measures as part of control programs. The six fact sheets and four supplements address stormwater permits, total maximum daily loads, combined sewer overflow long-term control plans, and enforcement actions. Click [here](#) for more info.

In keeping with the U.S. EPA's continuing efforts to raise awareness of and promote solutions to **nutrient** (nitrates, phosphorous, etc.) **pollution** (see, e.g., this [video](#)), the agency recently created a **Nutrient Pollution Microsite and Resource Directory** at <http://www.epa.gov/nutrientpollution>. Resources available at this microsite include guidance on and examples of effective [Nutrient Pollution Outreach and Education Materials](#). [The special focus of the EPA's [***Nonpoint Source News-Notes, Issue #91 \(May 2012\)***](#) is on **controlling nutrient pollution** through **regulatory and non-regulatory means** at the **state** level; there are also several [archived Watershed Academy webcasts](#) on this same topic.]

News on a related topic: Last fall, MassDEP Commissioner Ken Kimmell, along with the environmental agency commissioners from the other five New England states and New York, [agreed to pursue a voluntary regional initiative](#) to **reduce nutrient pollution to water bodies from the use of lawn fertilizers**. The states have called

upon the [New England Interstate Water Pollution Control Commission](#) (NEIWPC) to help facilitate this endeavor. The [Northeast States Voluntary Turf Fertilizer Initiative](#) was formally launched into action in late May 2012 as these state partners, with strong support from the EPA, began a series of [issue-specific meetings](#) with various [stakeholders](#). The goal is to jointly develop voluntary guidelines for reducing nutrient pollution to water bodies from lawn fertilizing, and have broad stakeholder buy-in on these guidelines by early 2013. Click [here](#) to read an article on this topic in the [Summer 2012 edition of MassDEP's *EnviroMatters* electronic newsletter](#).

The [Summer 2012 edition of the *Narragansett Bay Journal*](#) (NBJ) contains several interesting articles, not the least of which is an [article contributed by DER's Laila Parker and Michelle Craddock about the *River Instream Flow Stewards \(RIFLS\) Program*](#). While the majority of the NBJ's content is RI-focused, many of the topics covered (invasive aquatic species, impervious cover, citizen science) are quite similar to those in Massachusetts (see, e.g., the lead article, discussing citizen science tools like [Project Budburst](#)). In the meantime, the most recent (6/27/12) edition of the [Massachusetts Bays Window](#), the electronic newsletter of the [Massachusetts Bays Program](#), contains articles reporting on **several encouraging signs for anadromous fish, like herring and rainbow smelt** in the Commonwealth's rivers and streams connected to the coast (click [here](#) for a related news story).

Native to Eurasia, while the presence of the invasive exotic plant species [Perennial pepperweed](#) (*Lepidium latifolium*) was first recorded in Peabody, Massachusetts in 1924 and Norton, Connecticut in 1933, it has only recently been observed spreading rapidly in Massachusetts and Connecticut. In New England, infestations of *Lepidium latifolium* are mainly found near the coast and on coastal islands. Stands often occur at the upper edges of salt marshes above the high tide line, frequently forming dense stands. Many natural resource agencies, environmental groups and other concerned groups and individuals are mobilizing to control the spread of perennial pepperweed into coastal habitats (click [here](#) to read about such a project, coordinated by the [New England Wild Flower Society](#)). A helpful resource for these efforts is the [Perennial Pepperweed Control Handbook](#), co-authored by Elizabeth Duff and Peter Phippen, with contributions by Lou Wagner and Sarah Janson. The *Handbook* is available for free download in .pdf format by clicking [here](#); hard copies of the Handbook are available from Peter Phippen at PPhippen@mvpc.org.

Last but not least: the web page for the [Cape Cod Conservation District](#) serves as the repository for information on the [Cape Cod Water Resources Restoration Project](#) (CCWRRP), many of whose projects DER is actively involved in. Resources posted at this page include a visually-appealing and informative [two-page fact sheet on why the CCWRRP Matters to Massachusetts' Economy](#), a [CCWRRP Progress Report](#) as of June 2012, and the [CCWRRP blog](#). Recent blog postings include: [Fish ladder will give herring a leg up in Marstons Mills](#); [Protecting shellfish at Wychmere Harbor, Harwich](#); and [Restoring salt marshes at Red River Beach in Harwich](#), about a project reported on in [Ebb&Flow #12](#).

Non-Government On-line Resources (*in rough alphabetical order – the following are offered for information purposes only and are not an endorsement of the items listed below*)

Adventurers and Scientists for Conservation (ASC)

<http://www.adventureandscience.org>

ASC's primary initiative is to facilitate partnerships between adventure athletes and the researchers who need them to collect data all around the world. From mountains to the ocean, ASC enlists hundreds of athletes to make their time outside more meaningful. All ASC-enrolled athletes are volunteers and make the decision to become adventurer-scientists because they have a strong desire to make more of their expeditions. The ASC also works with NGOs, resource agencies, Guide Companies, Schools, and Businesses to design, recruit participants for, and implement rewarding and engaging [citizen-science programs](#). One of ASC's current projects is employing [crowd-sourced data from cyclists](#) to track the location of road kill, which (when compiled) is used to try to identify road kill hotspots. Such data can assist transportation planners and managers in prioritizing and designing improvements to reduce wildlife fatalities.

America's Great Waters Coalition

<http://www.nwf.org/Wildlife/What-We-Do/Waters/Great-Waters-Restoration/Great-Waters-Coalition.aspx>

With an online home at the [National Wildlife Federation](#) (NWF), America's Great Waters Coalition is an alliance of national, regional, state and local organizations working to protect, preserve, and restore our nation's Great Waters (click [here](#) to see them on a map). The coalition is a result of years of work by national and local organizations to bring the broader restoration community together to "raise all boats". [Click [here](#) to learn about one of the Great Waters in our region, the [Gulf of Maine Restoration Initiative](#), and [here](#) to see what else the NWF is doing to **protect wetlands and watersheds**.]

Catchafire

<http://www.catchafire.org>

Based in New York City, Catchafire's mission is to improve the quality of the volunteer experience by **providing pro bono opportunities for skilled professionals**. [Catchafire's vision](#) is to make it easy for every professional to use their skills for good, and to make it easy for every nonprofit and social enterprise to access and effectively use pro bono as a way to build capacity within their organization. Local groups currently partnering with Catchafire include the [Boston Harbor Association](#), the [Boston Harbor Island Alliance](#) and the [Environmental League of Massachusetts](#). Organizations that want to consider signing up with Catchafire should click [here](#) and [here](#) to see the range of skills available; professionals looking to lend their services to nonprofits should click [here](#).

Frogloop

<http://www.frogloop.com>

Frogloop is the nonprofit marketing blog for [Care2.com](#), "the largest online social network for people who want to 'make a difference'." Besides the timely and informative blog postings, other Frogloop resources include access to [free webinars](#) and [white papers](#) on various aspects of **fundraising** and related topics.

GreatNonprofits

<http://greatnonprofits.org>

In this era of social media, millions of people already have discovered that a review by someone who has gone to a restaurant or tried out a doctor is a useful way to evaluate the suitability of those services for themselves. Similarly, if a person has direct experience with a charitable organization, GreatNonprofits makes it easier for him or her to share that knowledge so that other people can discover that group as well. The reviews and ratings at GreatNonprofits are posted by people who have been touched by a nonprofit (e.g., as a volunteer, contributor, or beneficiary of the nonprofit's work). Nonprofits can click [here](#) to read about how GreatNonprofits can boost your visibility and "cred" (click [here](#) to view Massachusetts-based environmental groups already participating in this service), and others can click [here](#) to submit a review of a nonprofit group they have interacted with.

Massachusetts Watershed Coalition (MWC)'s Billion Gallons a Year (BGY) Campaign

<http://www.commonwaters.org/billion-gallons-a-year-campaign>

Clean water is essential to our families, our neighborhoods and our communities. The value of clean water for water supplies, recreation and other everyday benefits is enormous. Stormwater runoff from homes, businesses, streets and other hard surfaces is the greatest cause for damages to waters in Massachusetts. This runoff is produced by the entire community, and everyone can be part of the solution. The MWC's [BGY campaign](#) is intended to facilitate and encourage the more widespread adoption of stormwater best management practices (BMPs) throughout the Commonwealth that in the aggregate will **result in at least a billion gallons/year reduction in stormwater runoff**. Resources at commonwaters.org include [charts to help match BMPs with BGY partner organizations](#), specific advice directed to [homeowners](#), [businesses](#), [municipal boards](#) and others, as well as issue #s [2 \(April, 2012\)](#),

3 (May, 2012) and 4 (June, 2012) of the **Billion Gallons a Year** newsletter (click [here](#) to subscribe to future editions). [The MWC recently published a practical, easy-to-use **Rain Garden Pocket Guide** which provides property owners with information to build a customized rain garden to satisfy their own tastes, site conditions and budgets. Free hard copies of the Pocket Guide may be requested by emailing MWC at bgy@commonwaters.org or calling (978) 534-0379.]

Metropolitan Area Planning Council (MAPC)'s Greater Boston Cycling and Walking Map <http://mapc.org/resources/bike-transport>

MAPC's Greater Boston Cycling and Walking Map, redesigned for 2012 and **now smart-phone and tablet enabled**, covers more than 100 cities and towns in Greater Boston, showing walking trails, paths, bike lanes, cycle tracks, open space, public transit, roadways and more. The map is available in several formats: an [online, interactive map](#), a [downloadable copy](#) of the printed map, or you can obtain a free hard copy of the printed map at the [MAPC office](#) in downtown Boston or by contacting David Loutzenheiser, MAPC Transportation Planner, at dloutzenheiser@mapc.org or (617) 451-2770 ext. 2061. The online map is updated monthly, so **if you see any errors or omissions**, you can bring those to David's attention, or just click on the "Add Feedback" button at the top of the [interactive map](#). Also at the MAPC website is a [Trail Implementation Toolkit](#), developed to empower local planners and trail advocates by highlighting some of the more creative strategies that municipalities in the MAPC region have used for trail development, construction and maintenance. [Click [here](#) to access the new interactive online map showing the location of **trails/open space in the Southeastern Mass. / Buzzards Bay region**, and [here](#) for a similar trails database for **Cape Cod**.]

Nashua River Watershed Association (NRWA) <http://www.nashuariverwatershed.org>

The NRWA recently spiffed-up its web page to enhance its visual appeal and user-friendliness as well as facilitate access to improved content, such as: info on [upcoming programs and events](#); info on [paddling, fishing, hiking, biking and other recreational activities](#); info about [watershed communities \(human and natural\)](#); and an opportunity to learn about the "colorful" history and clean-up of the Nashua River through an [archive photo gallery](#).

National Recreation and Park Association (NRPA) <http://www.nrpa.org>

Founded in 1965 by conservationist and philanthropist [Laurance Rockefeller](#), the NRPA's mission is to advance parks, recreation, and [environmental conservation](#) efforts that enhance the quality of life for all people. Resources available at this website include [research papers](#), a downloadable document entitled [Building a Community Garden in Your Park: Opportunities for Health, Community, and Recreation](#), and a [large selection of online courses in various useful subjects](#), including [Boating and Fishing Best Practices](#), [Comprehensive Planning for Healthy Communities](#), [Connecting Children with Nature](#), [Environmental Stewardship](#), [Fundraising Strategies](#) and many more, all of which are available to anyone (you don't have to be a NRPA member, although being one would entitle you to a discount).

New England Water Works Association (NEWWA) <http://www.newwa.org>

Established in 1882, NEWWA's mission is "to promote public health, safety, quality of life, and environmental stewardship through education/training, advocacy, and outreach relating to safe drinking water". NEWWA's vision is "to inspire excellence in the drinking water profession, public confidence in tap water, and water resource stewardship". NEWWA's web page recently underwent a thorough revamping that enhanced its user-friendliness and access to its content, such as the [calendar of upcoming courses](#) (see, e.g., ["Sustainable Ways to Manage Your Groundwater Supply"](#)). The [NEWWA Best Management Practices and Advisories](#) section features several documents intended to **guide and promote water conservation by water suppliers and their customers** (see,

e.g., [*18 Reasons Why a Public Water Supplier Might Want to Pursue Water Conservation*](#), drafted by DER's Russ Cohen while serving on [NEWWA's Water Conservation Committee](#). Other resources at this page include a [career center](#) featuring water-resources-related job openings.

Online Watershed Library (OWL)

<http://www.awsp.org/publications/owl-intro.html>

OWL, a new service provided by the [Association of Watershed and Stormwater Professionals](#) (AWSPs), allows practitioners to readily access [Center for Watershed Protection](#) (CWP) and other watershed and stormwater resources to support the development and improvement of local programs. OWL is a searchable, online database of research, stormwater and watershed manuals and plans, assessment tools, and regulatory information. A monthly special feature of "hot topics" highlights innovative and up-and coming information to keep practitioners apprised of the latest stormwater and watershed issues. Upcoming features of OWL will include a new and improved version of the widely-used [Watershed Treatment Model](#) (WTM). Information on regulatory programs and example ordinances will also be featured as OWL is continuously updated to include the most current and useful information to advance watershed and stormwater programs, nationwide. Click [here](#) to access OWL or for more info.

Saltmarsh Habitat & Avian Research Program (SHARP)

<http://www.tidalmarshbirds.org>

Founded by [a group of academic, governmental, and non-profit collaborators](#) to provide critical information for the conservation of tidal-marsh birds, SHARP's short term goal is to provide information for all the New England and Mid-Atlantic states (see [survey locations](#) and [demographic study sites](#)) to protect areas that are important for the long-term conservation of tidal marsh birds. Over the next several years, this website will provide a consistent platform for monitoring the health of North America's tidal-marsh bird community in the face of anticipated sea-level rise and upland/watershed development. Resources at this site include [field methods](#) and [downloadable documents](#) and current news related to tidal-marsh bird and habitat conservation.

Save Water North Shore

<http://www.savewaternorthshore.org>

Saving water saves energy and money, helps restore our local rivers to health, and makes the region's water supplies more reliable during droughts. To this end, the [Ipswich River Watershed Association](#) (IRWA) partnered with several [collaborators](#) to develop this regional water conservation website, intended to help reduce water consumption in the northeastern Massachusetts region by 10 percent within five years, equivalent to a reduction of about 6-7 gallons per person per day. Save Water North Shore provides some simple, painless ways to reduce your water consumption without really altering your lifestyle. A good water conservation program is mostly a matter of using common sense and taking the time to think about water and how you use it. Get your entire family involved in this program, since the habits learned at an early age will make your children better environmental citizens in the future. [While this website is focused on reducing water consumption in communities relying in whole or in part on water withdrawn from the [Ipswich and Parker River watersheds](#), much of its content is highly applicable elsewhere.]

Snakes of Massachusetts

<http://www.masnakes.org>

This web page [dispels myths](#) and [provides useful facts](#) about the fourteen species of snakes known to occur within the Commonwealth. The web page's most useful feature is an [online field guide and fact sheet](#) to help identify and learn about each of the fourteen species (see, e.g., the page for the [northern water snake](#), which frequents rivers and other wet habitats).

Trout Magazine Winter 2012

<http://online.qmags.com/TU1211S>

The link above takes you to an electronic version (ordinarily accessible only to members) of the Winter 2012 edition of [*Trout: the Journal of Coldwater Fisheries Conservation*](#), the quarterly membership magazine of [Trout Unlimited](#). This issue contains a number of interesting articles, most notably “*Hope for the Salter*” (beginning on p.30), which reports on the successful and ongoing effort by many partners (including DER) to improve habitat for “salter” (sea-run) brook trout in the streams and rivers of southeast Mass., [Red Brook](#) in particular. Other items of interest in this issue include a Q&A (on p. 15) with Grafton, MA-based **outdoor/conservation writer Ted Williams** and an article (on pp. 34-35) entitled “*Fishing for Salters*”, co-authored by Steve Angers and coldwater streams and fisheries advocate Warren Winders.

UMass Extension’s Landscape Message

<http://extension.umass.edu/landscape/landscape-message>

The Message, now available online and free of charge, allows landscapers, arborists, turf managers, nursery growers and other Green Industry professionals to be in touch with local landscape-related issues on a 24-hour basis. The info provided (and presented by region of the state) includes: weather and general conditions reports; what insects are currently emerging; disease occurrences and potential disease problems; phenology information for key indicator plants; and pest management strategies, including Integrated Pest Management. Click [here](#) to read a recent edition of the Message and [here](#) to access UMass Extension’s useful series of [Plant Materials Fact Sheets](#); see also [Pest Identification Guide for Weeds, Insects and Diseases of Woody Ornamentals](#).

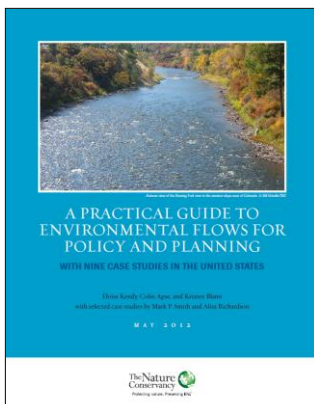
Visual Understanding Environment (VUE)

<http://vue.tufts.edu>

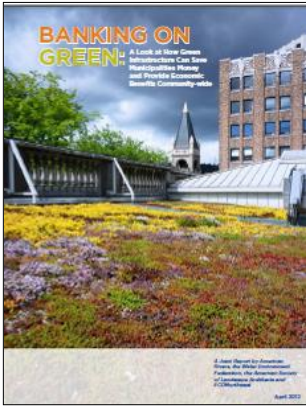
VUE, an “open source” project created by Tufts University, allows individuals and organizations to easily “map” relationships between concepts, ideas and digital content. VUE provides flexible tools for managing and integrating digital resources in support of teaching, learning and research while providing a flexible visual environment for structuring, presenting, and sharing digital information. VUE also provides supports for in-depth analysis of maps, with the ability to merge maps and export connectivity matrices to import in statistical packages. VUE also provide tools to apply semantic meaning to the maps, by way of ontologies and metadata schemas. While developed as a tool for faculty and students, VUE can be used by anyone interested in visually structuring digital content or as a tool for organizing personal digital resources. Click [here](#) for more info on VUE’s capabilities and how they might be useful to you.

Publications, Videos, etc.

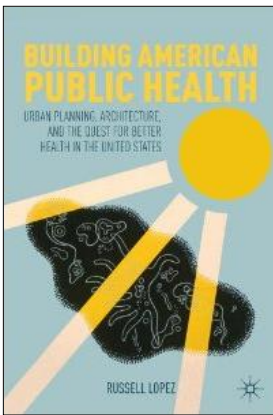
(the following are offered for information purposes only and are not an endorsement of the items listed below.)



Released this past spring, [A Practical Guide To Environmental Flows For Policy And Planning](#) explores how six states (including Massachusetts) and three interstate river basins are effectively developing and implementing regionalized environmental flow criteria to water resource planning, water withdrawal permitting, and multi-dam re-operation. The broad range of approaches utilized clearly demonstrates the feasibility of integrating science-based environmental flow needs into regional water management in the absence of site-specific assessments. Case studies from Michigan, Colorado, Massachusetts, Ohio, Rhode Island, Connecticut, and the interstate Potomac, Susquehanna, and Connecticut River basins convey the breadth of social and scientific processes undertaken. The report then walks through the fundamental steps of developing these processes, based on the [Ecological Limits of Hydrologic Alteration](#) (ELOHA) framework. For each step, various options are presented, referring to examples from the case studies. Click [here](#) for more info and to download this document in .pdf format, or write to ekendy@tnc.org for a high-resolution version suitable for printing.



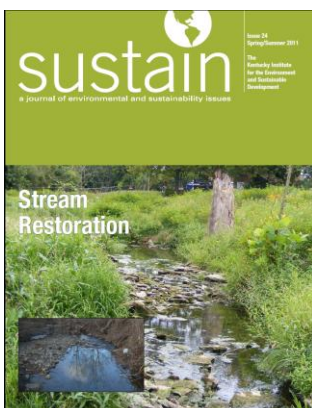
In response to the increasing need for communities across the country to **repair or replace failing and outdated stormwater management infrastructure**, American Rivers, the American Society of Landscape Architects, ECONorthwest, and the Water Environment Federation recently released [***Banking on Green: A Look at How Green Infrastructure Can Save Municipalities Money and Provide Economic Benefits Community-wide***](#). The report investigates the cost-effectiveness of green infrastructure and examines how these practices can increase energy efficiency and reduce energy costs, reduce localized flooding, and protect public health. The report concludes that, while traditional (grey) infrastructure was effective in transporting stormwater away, the practices resulted in increased water pollution and flooding. Many of these problems can be mitigated by cost- and energy-efficient green infrastructure practices. Click [here](#) to download a copy of *Banking on Green* in .pdf format. [Click [here](#) for info on a report on a related theme, entitled [***Water Works: Rebuilding Infrastructure, Creating Jobs, Greening the Environment***](#) .]



[***Building American Public Health: Urban Planning, Architecture, and the Quest for Better Public Health in the United States***](#), a new book by [Russell Lopez](#), tells the history of using the built environment to protect and promote health from the 19th to the 21st centuries. The book demonstrates that **the built environment in the US was predominantly shaped by the dominant health threats of the past and our attempts to mitigate their impacts**. The book's content is largely drawn from lectures presented in Lopez' [Boston University course on the built environment](#).



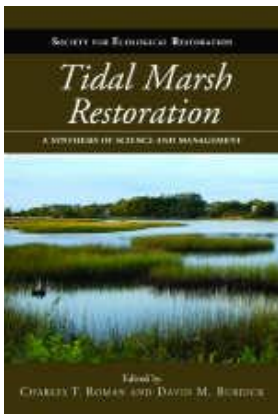
[***Working With Waste***](#), the theme of the [August 10, 2012 special edition of *Science Magazine*](#), is devoted to **innovative ways of waste reduction and beneficial reuse**. Topics covered in this issue include [water reclamation](#) (including an article entitled [Taking the "Waste" Out of "Wastewater" for Human Water Security and Ecosystem Sustainability](#)), better ways to [denitrify wastewater](#), [Getting Minds out of the Sewer](#), and [Finding a New Way to "Go"](#), discussing the benefits of alternatives to conventional flush toilets. The entire magazine can be accessed on-line for \$20 for a 24-hour period, or you may find hard copies at your local library. [Podcasts, videos and other electronic media](#) relating to this special issue are also available (also in [transcript](#) form). [Click [here](#) to read a recent blog on this topic by the editor of [Water Efficiency Magazine](#).]



[***Sustain Magazine***](#), a semi-annual journal focusing on environmental and sustainability topics (see, e.g., the [Spring-Summer 2012 issue, devoted to active transportation](#)), is published by the [Kentucky Institute for the Environment and Sustainable Development](#), housed at the [University of Louisville](#). The [Spring/Summer 2011 edition](#) of *Sustain* has [six articles covering various aspects of stream restoration](#), including groundwater and surface water connections, floodplain restoration, urban stream restoration, artificial ponds and a case study. Click [here](#) for a free download of that issue in .pdf format.

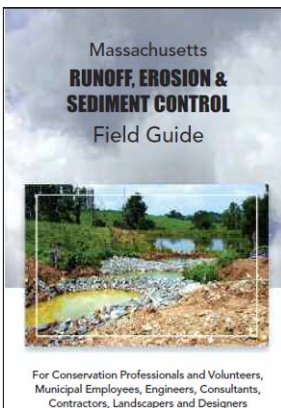


[**Restore-Adapt-Mitigate: Responding to Climate Change through Coastal Habitat Restoration**](#), a new study released this past spring by [Restore America's Estuaries](#), for the first time links ecologically important coastal habitat restoration with adaptation and mitigation strategies as a way to reduce the impacts of ongoing global climate change. The report demonstrates that coastal wetland restoration – everything from restoring salt marshes, to protecting mangroves, and creating new coastal wetlands – can be an integral part of public and private initiatives to combat climate change. Click [here](#) to download a copy of the report in .pdf format, and [here](#) to read the press release announcing the report.

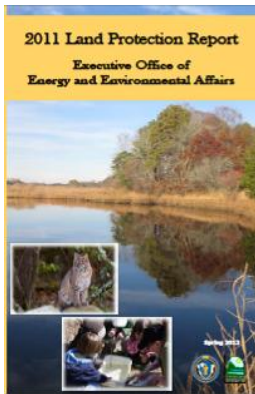


Many coastal tidal marshes have been significantly degraded by roadways and other projects that restrict tidal flows, limiting their ability to provide vital ecosystem services including support of fish and wildlife populations, flood protection, water quality maintenance, and open space. [**Tidal Marsh Restoration: A Synthesis of Science and Management**](#), the latest publication in [Island Press' Science and Practice of Ecological Restoration series](#), provides the scientific foundation and practical guidance necessary for coastal zone stewards to initiate salt marsh tidal restoration programs. Edited by [Charles T. Roman](#) and [David M. Burdick](#), the book compiles, synthesizes, and interprets the current state of knowledge on the science and practice of salt marsh restoration, bringing together leaders across a range of disciplines in the sciences (hydrology, soils, vegetation, zoology), engineering (hydraulics, modeling), and public policy, with coastal managers who offer an abundance of practical insight and guidance on the development of programs.

The work presents in-depth information from New England and Atlantic Canada, where the practice of restoring tidal flow to salt marshes has been ongoing for decades, and shows how that experience can inform restoration efforts around the world. Students and researchers involved in restoration science will find the technical syntheses, presentation of new concepts, and identification of research needs to be especially useful as they formulate research and monitoring questions, and interpret research findings. *Tidal Marsh Restoration* is an essential work for managers, planners, regulators, environmental and engineering consultants, and others engaged in planning, designing, and implementing projects or programs aimed at restoring tidal flow to tide-restricted or diked salt marshes. [See also [**Human Dimensions of Ecological Restoration: Integrating Science, Nature, and Culture**](#), another recently-published book in this series.]



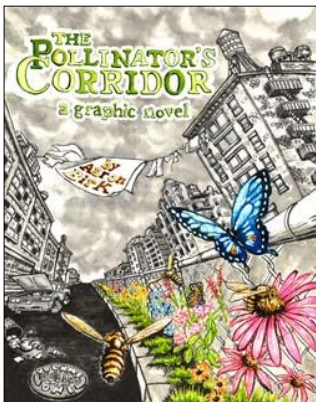
Sediment washing into rivers, streams, lakes, ponds and wetlands is one of the biggest water quality problems in Massachusetts. Best Management Practices (BMPs) and their applications can be used to control runoff, erosion and prevent sedimentation at construction sites. Implementing the right control practices saves money and time, protects natural resources and may be required to comply with local, state and federal laws. These and related points are all covered in detail in the [**Massachusetts Runoff, Erosion & Sediment Control Field Guide**](#), recently put out by the [Massachusetts Association of Conservation Commissions](#) (MACC). The first of its kind in the Northeast, the *Field Guide* is a 65-page, waterproof pocket guide for those involved in planning, executing and monitoring construction projects. Click [here](#) to order or for more info.



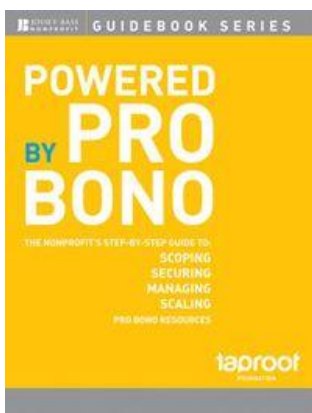
In Fiscal Year 2011, the [Mass. Executive Office of Energy and Environmental Affairs](#) (EEA) and its constituent agencies) acted directly or indirectly (via, e.g., grants to non-state entities) to protect 12,953 acres through 311 different land, park and conservation restriction projects. Expenditure of \$51.1 million in state and federal funds on 185 projects protected 7,999 acres and created or renovated 36 parks through grants, fee purchases, and conservation and agricultural preservation restrictions. An additional 4,954 acres were preserved through 126 EEA-approved conservation restrictions. Highlights of this work are presented in the [2011 Land Protection Report](#), available for [viewing online](#) or [downloadable in .pdf format](#). Click [here](#) to read the EEA press release announcing the Report; and [here](#) to read a similar EEA press release about 18 new and/or upgraded boating and/or fishing access facilities completed by the [Mass. Office of Fishing and Boating Access](#) (OFBA).



[Native Plant Site Solutions for Backyard Habitat](#), published by the [University of Rhode Island \(URI\) Outreach Center](#), is a “how-to” guide for designers and homeowners who are interested in enhancing wildlife habitat value in urban and suburban areas. The booklet documents native plant communities that can replace impervious surfaces and lawns, thus allowing stormwater runoff from residential properties to nourish and support wildlife habitat instead of running off into storm drains and/or polluting adjacent waterways. Click [here](#) to download a copy of the booklet. Other useful resources available at the URI Outreach Center include [Recommended Plantings for Migratory Songbird Habitat Management](#), and the [RI Coastal Plant Guide](#). Contact Kate Venturini at kate@uri.edu for more info.

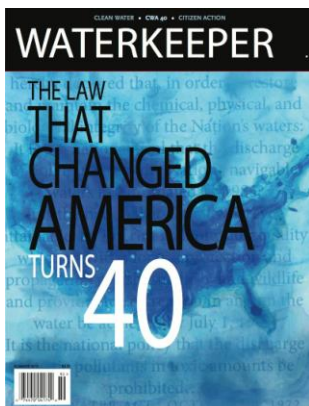


[The Pollinator's Corridor](#), a newly [self-published](#) graphic novel by author/artist [Aaron Birk](#), is a portrait of how humans have transformed urban vacant lots from Boston to Philadelphia into vibrant community gardens. Set in the aftermath of the 1970s landlord fires, *The Pollinator's Corridor* follows the lives of three friends in their attempt to connect watersheds, city parks and forest fragments via **corridors of native flowering plants, restoring biodiversity** to the streets and awakening communities to the soil beneath their feet. Click [here](#) to order a book, [here](#) to view a short video about the book, and [here](#) to view an excerpt of *The Pollinator's Corridor* that ran in the Philadelphia *CityPaper*. [Click [here](#) to download [Selecting Plants for Pollinators: A Regional Guide for Farmers, Land Managers, and Gardeners in the Ecological Region of the Eastern Broadleaf Forest](#) (covering lower elevation/eastern Mass., [here](#) for a similar guide for higher elevation/western Mass.), and [here](#) to read an article on a related theme.]

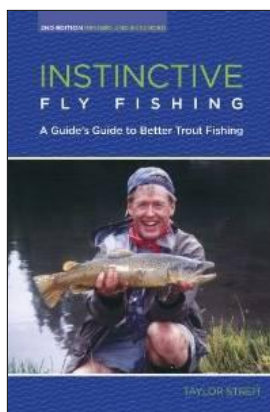


Savvy nonprofits use strategic management, marketing, technology, and leadership to be competitive. With strapped budgets, many nonprofits cannot afford to pay for these resources. **Businesses are often overlooked as an effective source of skilled professionals who can supply the needed skills.** [Powered by Pro Bono: The Nonprofits Step-by-Step Guide to Scoping, Securing, Managing, and Scaling Pro Bono Resources](#), due out next month, shares the [Taproot Foundation](#)'s pro bono best practices and shows nonprofit managers to apply them to their own unique challenges in a low-to-no-cost way. Author Aaron Hurst offers keys to

identifying opportunities for using pro bono sources, recruiting pro bono resources, and managing pro bono projects effectively. Click [here](#) and [here](#) for blog postings by the author on this topic, or click [here](#) for info on how to “tap” into [Taproot’s pro bono talent pool](#).



The mission of the [Waterkeeper Alliance](#) is to empower communities to stand up for their right to clean water and for the wise and equitable use of water resources, both locally and globally. The vision of the Waterkeeper movement is for fishable, swimmable and drinkable waterways worldwide. The organization believes the best way to achieve this vision is through the Waterkeeper method of grassroots advocacy (click [here](#) to see Waterkeeper groups active in this region). The Alliance recently made its [Waterkeeper Magazine](#) available in digital form. Beginning with the [**Summer 2012 issue, dedicated to the 40th Anniversary of the Clean Water Act**](#), the magazine's full content can now be viewed via an interactive media interface available on all desktop browsers and mobile devices. Click [here](#) to see it.



The thoroughly revised and expanded new edition of [*Instinctive Fly Fishing: A Guide's Guide to Better Trout Fishing*](#), by New Mexico-based fishing guide [Taylor Streit](#), addresses the “real reasons people catch trout,” and offers suggestions and tips to help the aspiring angler take advantage of his or her own fly-fishing instincts. The first edition of the book (2003) has been rewritten with an eye toward a new audience. *Instinctive Fly Fishing* aims for those who fish in competitive situations and extensively fished waters, which applies especially to those in the eastern half of the United States. Additional content includes fishing tailwaters with tiny flies, practical information on insect hatches (tricos, blue winged olives, and green drakes) and illustrations of knots and rigs. Also included are additional chapters on the environment, stream manners, and safety. Click [here](#) to hear an interview with the author that recently aired on [WBUR's On Point](#) radio program.

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The [Mass. Watershed Coalition \(MWC\)](#)'s "[mwc-list](#)" [listserv](#) is a great source of information on river- and watershed-related funding and job opportunities, upcoming events, recent articles and more. Many of the posted items are time-sensitive and can't wait until the next edition of *Ebb&Flow*. You can access the mwc-list listserv at <http://lists.topica.com/lists/mwc-list@igc.topica.com>, where you can subscribe to receive the posted messages to your e-mail address, or simply read them online. Highly recommended!



Coordinated by the Mass. Executive Office of Energy and Environmental Affairs (EEA), [***The Great Outdoors Blog***](#) is dedicated to Massachusetts outdoor activities, events, wildlife, state parks and local agriculture that features a **calendar of [Massachusetts outdoor events](#)**. Learn about native marsh species, guides for the state's best paddling adventures and learn about wetlands restoration projects that protect recreational and commercial fisheries. [Click [here](#) for the related "Green Massachusetts" photo gallery.]



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